Dahua TECHNOLOGY

DH-IPC-HF7842F

8MP AI BOX Network Camera

ePoE

· 8MP, 1/1.8" CMOS image sensor, low illuminance, high image definition

· Max output 8MP (2840×2160)@25/30fps

· H.264&H.265 coding, high compression ration

· Wide dynamic, day/night, 3D noise reduction, AWB, HLC, BLC

· ROI, SVC, SMART H.264/H.265, flexible coding, applicable to various bandwidth and storage environments

· With deep learning algorithm, it supports people counting, face detection, perimeter protection, ANPR and video metadata.

· 24V AC/POE/ 12V DC power support

· Five streams for three-channel HD video dispaly

System Overview

With Hisilicon advanced chip, image sensor and deep learning algorithm, Dahua Ultra-AI series network camera supports various intelligent functions and meet customers' requirements in different scenes. Adopting excellent image processing technology, Dahua AI network camera performs good in WD and low illuminance environment. For intelligent functions, it supports face detection, people counting, perimeter protection, video structurization (vehicle, non-motor vehicle, personnel detection and snapshot), and ANPR. The camera provides better solution to image processing and intelligent application.

Functions

Face Capture

Face capture is a software application that automatically captures faces from within a digital image or a video frame from a video source. Dahua cameras use advanced deep learning algorithms and are trained by a large number of face data sources, enabling the camera to locate faces quickly and accurately from the video source and capture facial images.

People Counting

People counting adopts deep learning algorithm to detect human body target, and track the target in real time, which realizes independent statistics of entry number and exit number. And the accuracy rate is up to 98%.

Video Structurization

Video structurization adopts deep learning algorithm to detect vehicle, non-motor vehicle and people in the image, track the target in real time, and then snapshot the target and extract attribute.

Smart H.265+

Smart H.265+ is an effective coding method based on H.265. Comparing with H.265, smart H.265+ improves efficiency more than 70% through auto scene judgement, dynamic ROI and dynamic GOP. Smart H.265+ provides better solution to save storage, bandwidth and power

consumption.

EPOE

Dahua ePoE technology, designed internally, adopts advanced 2D-PAM3 coding modulation from physical layer, and realizes full duplex transmission over 800 meters at the speed of 10Mbps, or 300 meters at the speed of 100Mbps via Cat 5 or coaxial cable media. Besides, it supports PoE and PoC power supply technology which has greatly simplified construction and wiring. Dahua ePoE technology offer a new way to accomplish long distance transmission between IP camera and network switch. It allows more flexible surveillance system design, improves reliability and saves construction and wiring cost.

Perimeter Protection

Dahua's Perimeter Protection functions significantly improved accuracy. Perimeter Protection reduces false alarms and decreases pixel count requirements for object detection. Perimeter Protection features custom tripwires based on object type for automation in limited access areas such as pedestrian or vehicle-only zones. This combination of advanced AI analytics and real-time alerts to a desktop or to a mobile client reduces system requirements and resources resulting in greater surveillance system efficiency.

Onvif

Technical Specification

Camera

Image Sensor	1/1.8" 8Megapixel progressive CMOS
Effective Pixels	3840 (H) × 2160 (V)
ROM	4 GB
RAM	2 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100000 s
Min. Illumination	0.005 Lux@F1.5 (Color, 1/3s, 30IRE)

Lens

Lens Type	Manual zoom
Mount Type	C/CS

Smart event

General IVS Analytics	Abandoned object, moving object

Professional, intelligent

Perimeter Protection	Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering.
Face Snapshot	Yes
Face Detection	Face detection, track, priority, snapshot, face enhancement, face exposure, face attribute extract, 6 attributes and 8 expressions: Gender, age, glasses, expressions (anger, sadness, disgust, fear, surprise, calm, happiness and confusion), mask, beard Face matting setting: face, single inch photo Three snapshot methods: real-time snapshot, priority snapshot, quality priority Face angle filter Priority time setting
ANPR	ANPR, track, priority, snapshot Vehicle attributes: license plate, vehicle type, vehicle color,vehicle brand Other attributes: sun visor, seat belt, smoking, phoning, in-car accessories, annual vehicle inspection mark
Video Structurization	Vehicle detection, non-motor vehicle detection, personnel detection, face detection, track, snapshot, optimization, report high quality picture, vehicle attributes (license plate, vehicle type, vehicle color, and vehicle brand), other attributes (sun visor, seatbelt, smoking, phoning, in-car accessories, and annual vehicle inspection mark), non-motor vehicle attributes: vehicle type, vehicle color,driver number, cloth type, cloth color, and hat), personnel attribute (cloth type, trousers type, cloth color, trousers color, knapsack, and gender), face attribute (gender, age , glasses, mask, and beard)
People Counting	People counting (count the entry number, exit number and pass number), display and output daily/monthly/ annual statistics, No. in area
Intelligent Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos.

Video

Video Compression	H.265, H.264, H.264H, H.264B, MJPEG
Smart Codec	H.264: Yes H.265: Yes

Video Frame Rate	Main Stream: 3840 × 2160 (1–25/30 fps) sub stream 1: 704 × 576 (1–25/30 fps) sub stream 2: 1920 × 1080 (1–25/30 fps) sub stream 3: 1920 × 1080 (1–25/30 fps) sub stream 4: 704 × 576 (1–25/30 fps)
Stream Capability	5 streams
Resolution	8M (3840 × 2160), 6M (3072 × 2048/3072 × 1728), 5M (2592 × 1944), 4M (2688 × 1520), 3M(2048 × 1536/2304 × 1296), 1080p (1920 ×1 080), 1.3M (1280 × 960), 720p (1280 × 720), D1 (704 × 576/704 × 480), VGA (640 × 480), CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 kbps–16384 kbps H.265: 12 kbps–16384 kbps
Day/Night	ICR switch
BLC	Yes
WDR	120 dB
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Manual
Noise Reduction	3DNR
Motion Detection	Yes
Region of Interest(RoI)	Yes (4 areas)
Electronic Image Stabilization(EIS)	Yes
Smart IR	Yes (Adjust by user)
Defog	Yes
Image Rotation	0°/90°/180°/270° (Supports 90°/270° with 1080p resolution or below.)
Mirror	Yes
Privacy Masking	4 areas

Audio

Audio Compression	G.711a, G.711Mu, G726, AAC

Network

Network	RJ-45 (100/1000 Base-T)
Protocol	HTTP, TCP, ARP, RTSP, RTP, UDP, RTCP, SMTP, FTP, DHCP, DNS, DDNS, PPPoE, IPv4/v6, SNMP, QoS, UPnP, NTP
Interoperability	ONVIF(Profile S/Profile G); CGI; P2P; RTMP
Scene self-adaptation	Yes
User/Host	20
Edge Storage	FTP; Micro SD card (256 G); NAS; SFTP
Browser	IE: Versions later than IE9 Google: Versions later than Chrome 42 Firefox: Versions later than Firefox 48.0.2
Management Software	Smart PSS, DSS PRO, NVR, IVSS
Mobile Phone	IOS, Android

Certification

Certifications	CE-LVD: EN60950-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07

Port

RS-485	1 (Bit rate: 1200 bps-115200 bps)
Audio Input	Audio Interface: 2/1 channel In/Out
Audio Output	
Alarm Input	2 channel In: 5mA 5V DC 2 channel Out: 1000mA 30V DC/500mA 50V AC
Alarm Output	

Power

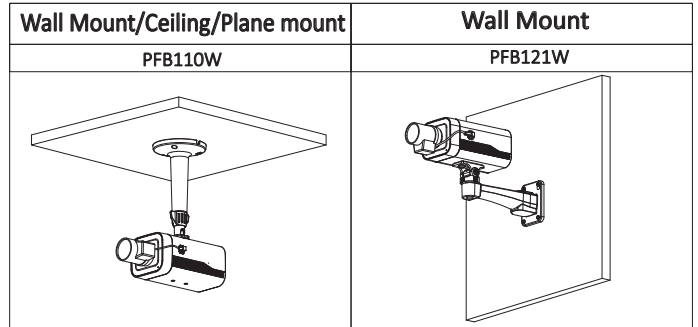|	
Power Supply	12V DC/24V AC/POE
Power Consumption	<14.4W

Environment

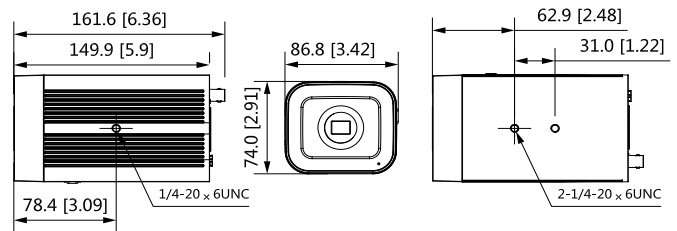|	
Operating Temperature	-30°C to +60°C (-22°F to +140°F)
Operating Humidity	≤95%
Storage Temperature	-30°C to +60°C (-22°F to +140°F)

Structure

Casing	Metal
Dimensions	86 mm×74 mm×150 mm (3.39" × 2.91" × 5.91") (L × W × H)
Net Weight	0.8 kg (1.76 lb)
Gross Weight	0.9 kg (1.98 lb)

Accessories

Optional:

DH-PFB110W
Wall Mount

DH-PFB121W
Wall Mount

DH-PLZ21C0-D
10.5-42 mm

DH-PLZ20C0-D
3.7-16 mm

DH-PFH610N
Housings

Wall Mount/Ceiling/Plane mount	Wall Mount
PFB110W	PFB121W

Dimensions (mm/inch)

161.6 [6.36]
149.9 [5.9]
78.4 [3.09]
1/4-20 ₓ 6UNC

86.8 [3.42]
74.0 [2.91]

62.9 [2.48]
31.0 [1.22]
2-1/4-20 ₓ 6UNC

Ordering Information

Type	Part Number	Description
8MP Camera	DH-IPC-HF7842FP	8MP AI BOX Network Camera
	IPC-HF7842FP	
	DH-IPC-HF7842FN	
	IPC-HF7842FN	
Accessories (optional)	DH-PFB110W	Wall /Ceiling/Plane mount
	DH-PFB121W	Wall Mount
	DH-PLZ21C0-D	10.5-42 mm
	DH-PLZ20C0-D	3.7-16 mm
	DH-PFH610N	Housings

alhua
TECHNOLOGY